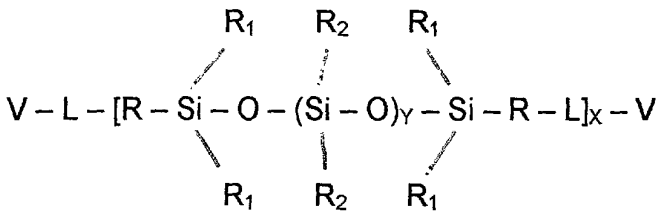
We claim:

1. A prepolymer comprising:



wherein the V groups may be the same or different unsaturated photo or thermal polymerizable substituents of the general structure $R_3CH=C(R_4)(CH_2)_p(W)_q(Z)_q(Ar)_qR_5$; the R groups may be the same or different saturated C_{1-10} hydrocarbon substituents; the R_1 groups may be the same or different C_{1-10} alkyl substituents; the R_2 groups may be the same or different selected from the group consisting of C_{1-10} alkyl substituents, C_{1-10} fluoroalkyl substituents, C_{2-20} alkyl-fluoroalkyl substituents and C_{6-30} aromatic substituents such as for example but not limited to phenyl; the L groups, which may or may not be present in the subject prepolymers, may be the same or different urethane, urea,

carbonate or ester linkages; y is a natural number greater than 4 representing the sum of siloxane moieties with randomly differing R_2 groups as defined above so as to have a molar ratio of aromatic substituents to alkyl substituents no less than 1:4; x is a natural number such that the prepolymer molecular weight is at least approximately 1000 and refractive index is at least approximately 1.45; R_3 is selected from the group consisting of hydrogen, C_{1-10} alkyl and –CO-U-R_1, but preferably hydrogen; R_4 is selected from the group consisting of hydrogen and methyl; R_5 is a C_{1-10} divalent alkylene radical; the W group is selected from the group consisting of –CO- and –OCO-; the Z group is selected from the group consisting of –O- and –NH-; the Ar groups may be the same or different C_{6-30} aromatic radicals; p is a non-negative integer less than 7; q is either 0 or 1; and U is selected from the group consisting of –OC_{1-12} alkyl radical, -SC_{1-12} alkyl radical and –NHC_{1-12} alkyl radical.

2. The prepolymer of claim 1 wherein at least one of said V groups is an acrylate group.

3. The prepolymer of claim 1 wherein at least one of said V groups is a methacrylate group.

4. The prepolymer of claim 1 wherein at least one of said L groups is a urethane linkage.

5. The prepolymer of claim 1 wherein each R_1 group is methyl and each R_2 group is phenyl.

6. The prepolymer of claim 1 wherein each R group is trimethylene or tetramethylene.

7. A polymeric composition produced through the copolymerization of one or more prepolymers of claim 1 with one or more aromatic monomers, alkyl monomers, hydrophilic monomers or a combination thereof.

8. The polymeric composition of claim 7 wherein said one or more aromatic monomers are selected from the group consisting of acrylates, methacrylates, acrylamides and methacrylamides, each with aromatic substituents.

9. The polymeric composition of claim 7 wherein said one or more aromatic monomers are selected from the group consisting of phenyl acrylate, phenyl(meth)acrylate, phenyl acrylamide, benzyl acrylate, benzyl acrylamide, phenylethylacrylate, phenyl(meth)acrylamide, phenylethyl(meth)acrylate and benzyl(meth)acrylate.

10. The polymeric composition of claim 7 wherein said one or more alkyl monomers are selected from the group consisting of C_{1-20} alkyl acrylate, C_{1-20} alkyl methacrylate, C_{5-20} acrylamide and C_{5-20} methacrylamide.

11. The polymeric composition of claim 7 wherein said one or more alkyl monomers are selected from the group consisting of methyl acrylate, ethyl acrylate, n-propyl acrylate, n-butyl acrylate, n-hexyl acrylate, n-octyl acrylate, 2-ethylhexyl acrylate, n-propyl methacrylate, n-butyl methacrylate, n-hexyl methacrylate, n-octyl methacrylate, 2-ethylhexyl methacrylate and n-octyl acrylamide.

12. The polymeric composition of claim 7 wherein said one or more hydrophilic monomers are selected from the group consisting of N,N-dimethyl acrylamide, N-vinylpyrrolidone, 2-hydroxyethyl methacrylate, glycerol methacrylate, 2-hydroxyethyl acrylate, acrylamide, n-methyl acrylamide, acrylic acid and (meth)acrylic acid.

13. A method of manufacturing the prepolymer of claim 1 comprising:
reacting a hydroxyalkyl-terminated polysiloxane with a diisocyanate, a diacidchloride or phosgene; and
end-capping with a hydroxy or amino containing monomer.

14. The method of claim 13 wherein said diisocyanate is isophorone diisocyanate.

15. A method of producing the polymeric composition of claim 7 useful in the manufacture of ophthalmic devices comprising:
reacting one or more polysiloxane prepolymers with one or more aromatic monomers, alkyl monomers or hydrophilic monomers.

16. The method of claim 15 wherein said one or more aromatic monomers are selected from the group consisting of acrylates, methacrylates, acrylamides and methacrylamides, each with aromatic substituents.

17. The method of claim 15 wherein said one or more aromatic monomers are selected from the group consisting of phenyl acrylate, phenyl(meth)acrylate, phenyl acrylamide, benzyl acrylate, benzyl acrylamide, phenylethylacrylate, phenyl(meth)acrylamide, phenylethyl(meth)acrylate and benzyl(meth)acrylate.

18. The method of claim 15 wherein said one or more alkyl monomers are selected from the group consisting of C_{1-20} alkyl acrylate, C_{1-20} alkyl methacrylate, C_{5-20} acrylamide and C_{5-20} methacrylamide.

19. The method of claim 15 wherein said one or more alkyl monomers are selected from the group consisting of methyl acrylate, ethyl acrylate, n-propyl acrylate, n-butyl acrylate, n-hexyl acrylate, n-octyl acrylate, 2-ethylhexyl acrylate, n-propyl methacrylate, n-butyl methacrylate, n-hexyl methacrylate, n-octyl methacrylate, 2-ethylhexyl methacrylate and n-octyl acrylamide.

20. The method of claim 15 wherein said one or more hydrophilic monomers are selected from the group consisting of N,N-dimethyl acrylamide, N-vinylpyrrolidone, 2-hydroxyethyl methacrylate, glycerol methacrylate, 2-hydroxyethyl acrylate, acrylamide, n-methyl acrylamide, acrylic acid and (meth)acrylic acid.

21. A method of producing an ophthalmic device using the polymeric composition produced through the method of claim 15 comprising:

casting said polymeric composition in the form of a rod;

lathing or machining said rod into disks; and

lathing or machining said disks into an ophthalmic device.

22. A method of using the ophthalmic device produced through the method of claim 21 comprising:

making an incision in the cornea of an eye; and

implanting said ophthalmic device.

23. A method of producing an ophthalmic device using a polymeric composition produced from one or more of the prepolymers of claim 1 comprising:

pouring said polymeric composition prior to curing into a mold;

curing said polymeric composition; and

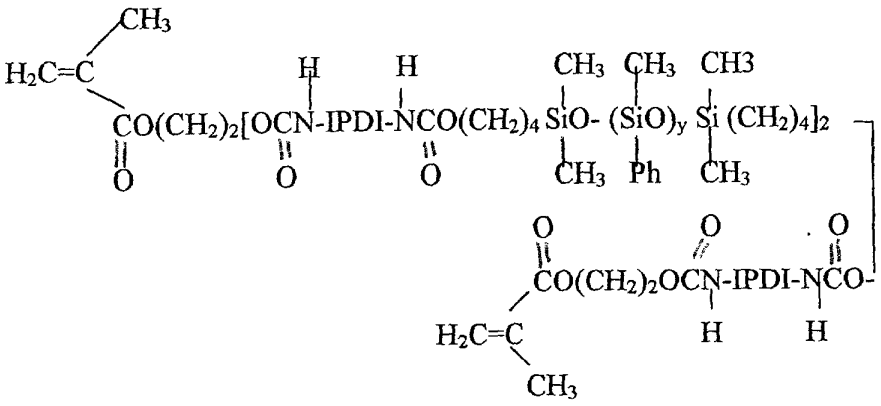
removing said polymeric composition from said mold following curing thereof.

24. A method of using the ophthalmic device produced through the method of claim 21 or 23 comprising:

making an incision in the cornea of an eye; and

implanting said ophthalmic device.

25. A prepolymer comprising:



wherein IPDI represents an isophorone diioscyanate residue after removing an isocyanate group, the Ph groups are the same or different aromatic substituents and x is a natural number such that the prepolymer molecular weight is at least approximately 1000 and refractive index is at least approximately 1.45.